

Through his NAI DDF award, Andrey Bekker participated in the International Geological Congress (IGC) workshop at Trondheim, Norway on May 29-30, 2008. The workshop was focused on planning the scientific component involved with the drill cores drilled through the Paleoproterozoic successions of Karelia and Kola Peninsula, Russia in 2007 by the International Continental Drilling Program (ICDP) with co-funding from NAI and NSF. Following the workshop, Dr. Bekker went for fieldwork in Karelia, Russia with his collaborator Dr. Pavel Medvedev, from the Institute of Geology, Karelian Filial of the Russian Academy of Sciences. They collected samples from available drill cores, visited mines and outcrops, and discussed future collaboration within the framework of ICDP project. Bekker spent 8 days in Karelia during this visit. Attached photos show Dr. Pavel Medvedev in front of the superdeep (~4 km deep) drill core currently drilled through the Paleoproterozoic succession of Karelia, Russia by Russian scientists. Bekker and Medvedev visited the Shunga Mine with the 2.0 Ga petrified oil-forming layers of anthraxolite that was mined more than 100 years ago. The petroleum was expelled from rocks into the Paleoproterozoic basin and formed asphalt crusts that float in water until they were buried in sediments (see attached photo). Microbial mats were likely feeding on this organic material in relatively shallow but below wave base setting (see attached wrinkle structures in microbial mats). Bekker spent another week in Saint-Petersburg, Russia visiting Dr. Victor Podkovyrov at the Precambrian Institute of Geology at the Russian Academy of Sciences. They discussed and worked on papers related to the Paleoproterozoic successions of Siberia, Russia.